- TEST RESULTS FOR THE XP-3 75-MW KLYSTRON (SLAC)

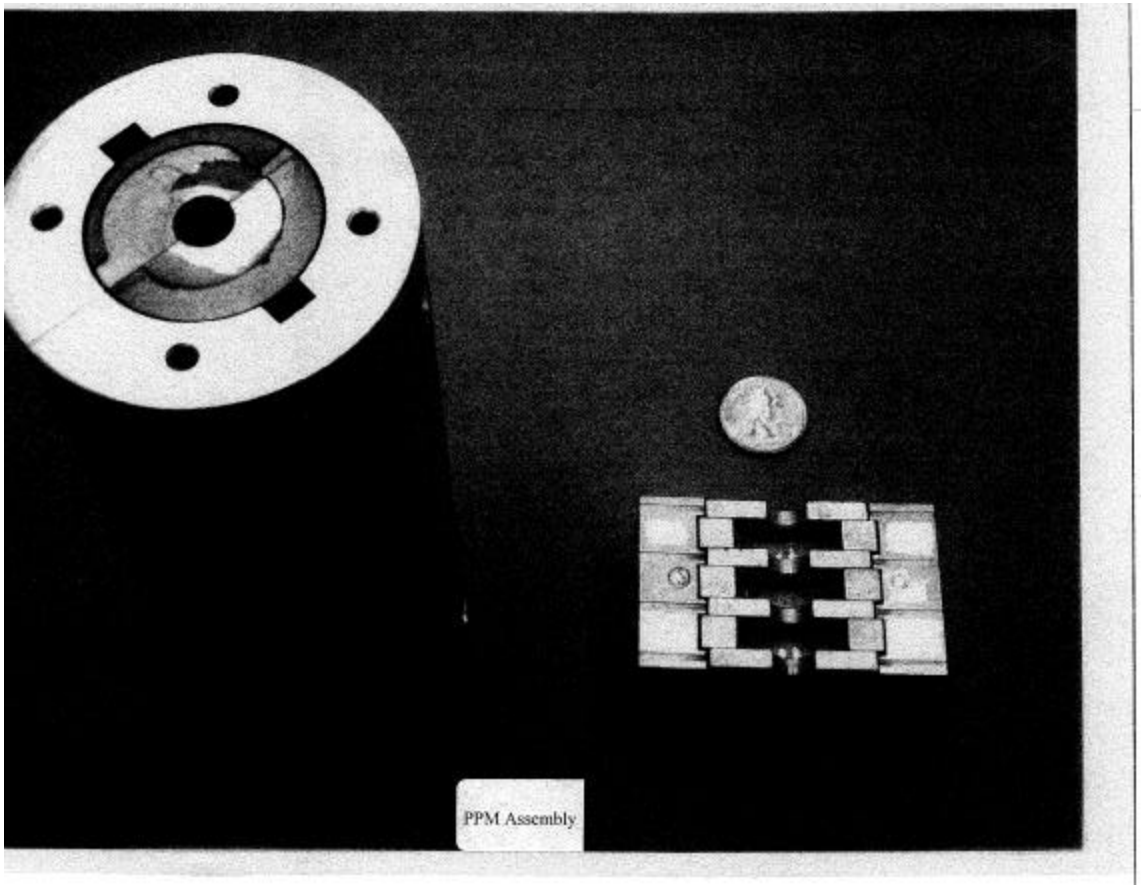
- PRELIMINARY RESULTS FOR THE CPI XP-3 VERSION

- A SCHEDULE FOR THE CONSTRUCTION OF 3 XP-4s
(IF NECESSARY)

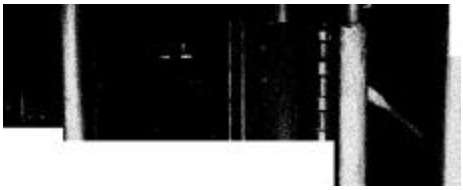
ALSO,

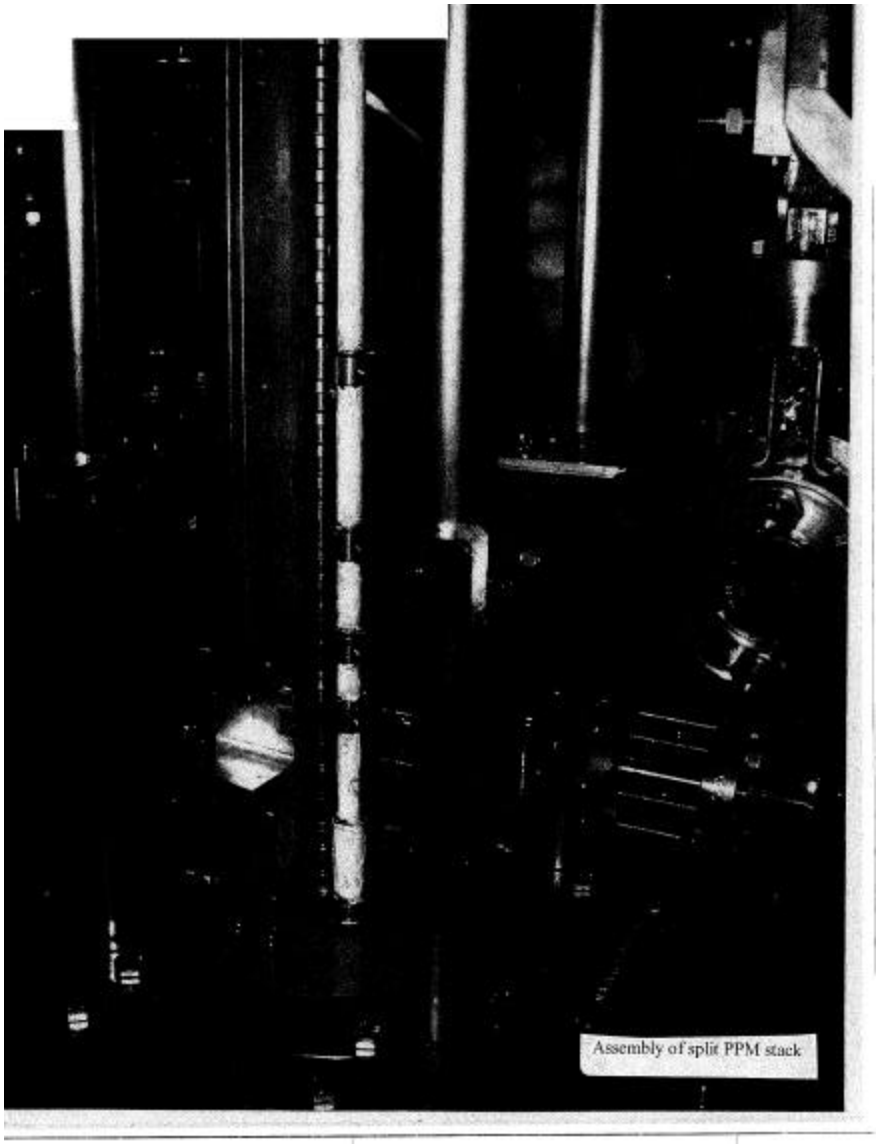
SOME SIMULATION RESULTS FOR THE "PLUG-COMPATIBLE"

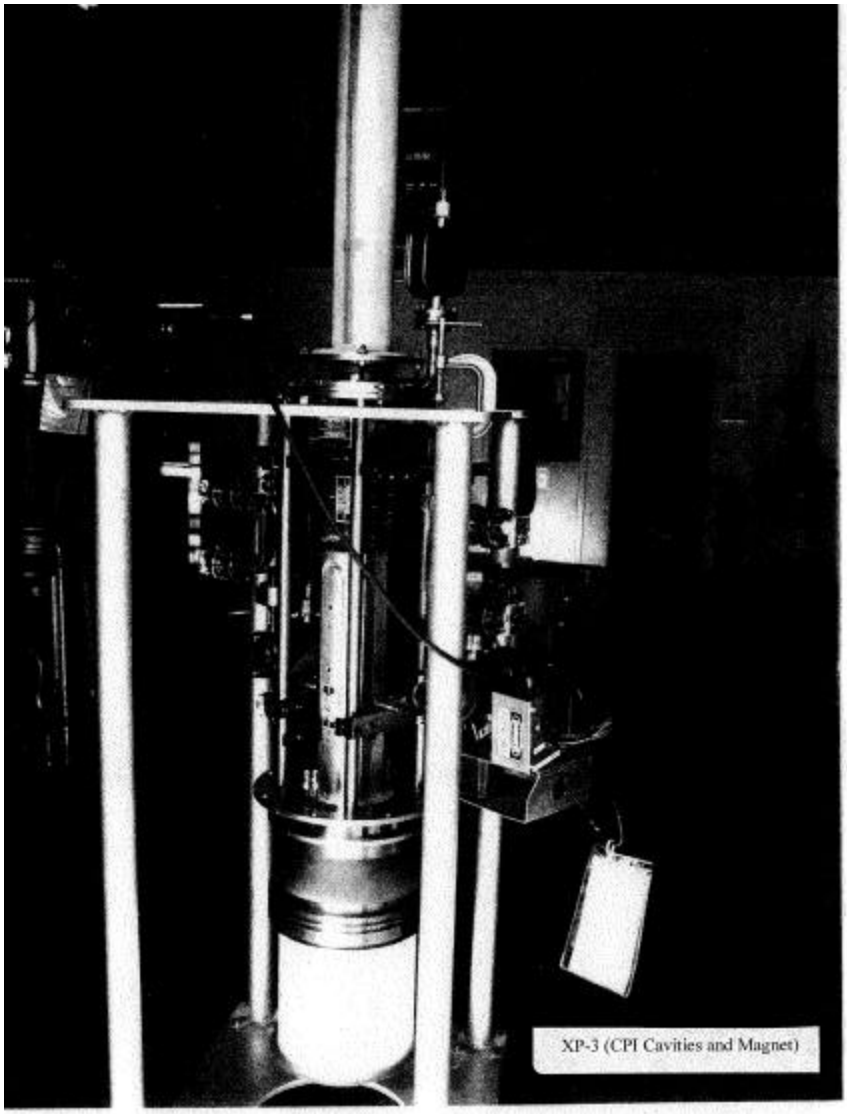
SHEET BEAM 75-MW KLYSTRON


PPM Assembly

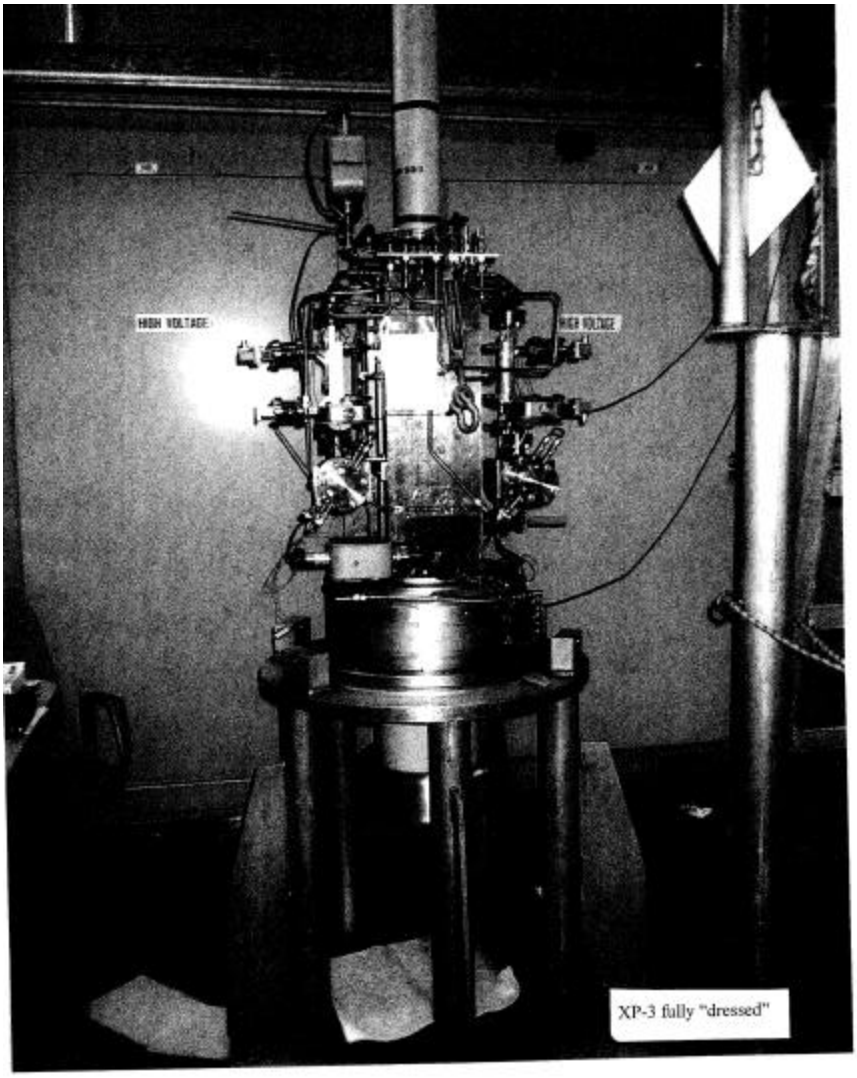
Split PPM Polepieces



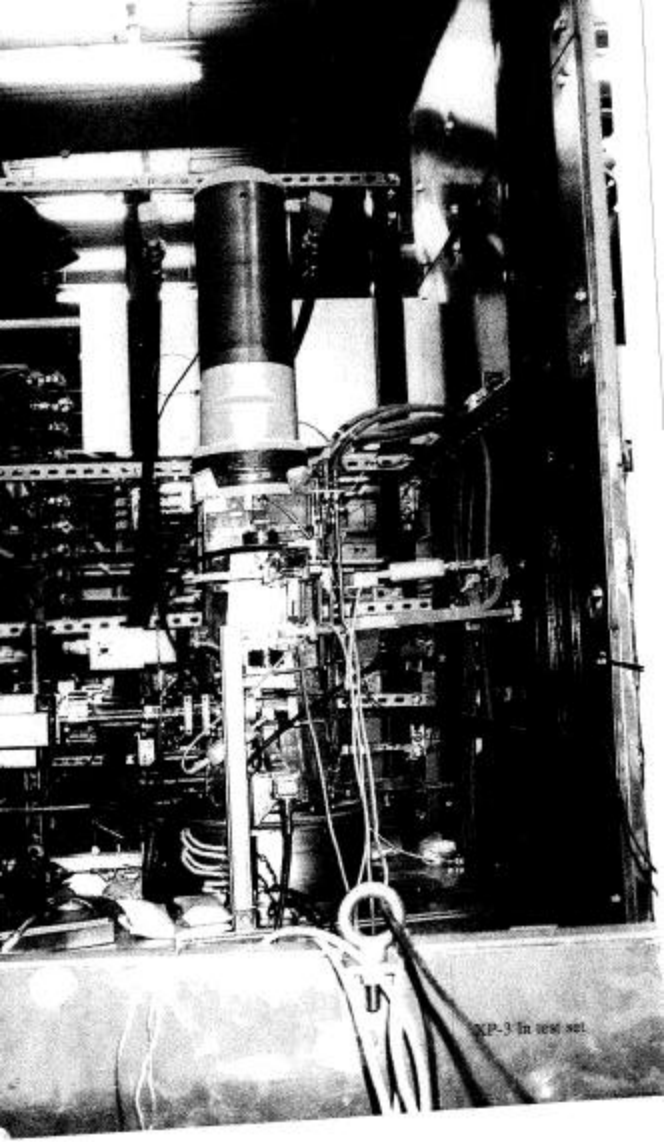

Assembly of split PPM stack



XP-3 (CPI Cavities and Magnet)



XP-3 fully "dressed"



XP-3 in test set

XPTask 4. Task Force Milestone Chart

Force Milestone

Chart

;April May June
July August September October November December
January 11 February

Floor O ISchedu

: ~ ~74'S.davs .. ~ Mon 4129102 3 Thu 112103

- --~

x,

CURRENTi FIELD

FOR NLC KLYS I O"

11. ~~

~ VW 267 'A

... ._., ..., ... _ „. , _ : n :.r __'-

,. . „.;.....:: .....;T

~~ , ;::, _ ~„- ~ V

... ..

,. ....~y.

~ 2a ~ 6cm

40

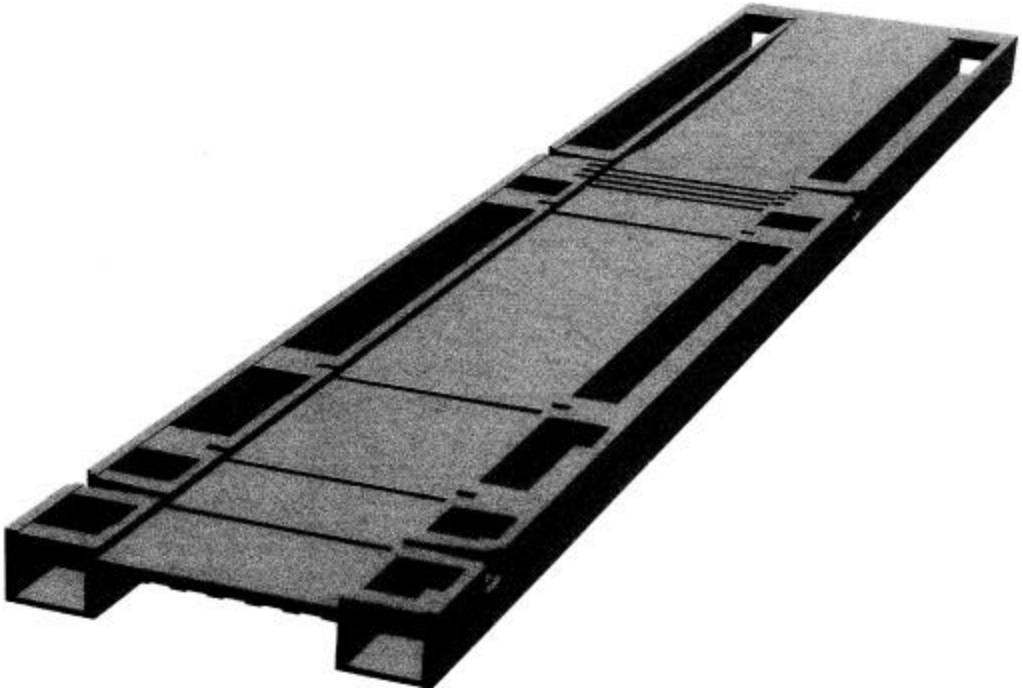
·~

J = 32 A/cm²

b 2600

:-

A double-beam SBK (150 MW)



One half of an SBK cavity and collector structure

GAIN CONPARISON
SHEET AND ROUND-SEAM NLC KLYSTRONS

'fps _ n*r twn nti_ Yk _ wavelength, and looby the Wom only, Is:

The various pararndm are:

	"Plug-compatible" SBK (2-cell, extended cavity)	401000K 0600*04 cavity) _.
Coupling coefficient M		26
Debunching, ω/ω_q		
R/Q (ohms)		
Beam-loaded Q, Qb	34	500
Relativity, $2/\sigma(\sigma+1)$		0.34

31 d8

Ez across the beam for the 2 cell design

0.7

I~

0.6

0.5

0.4

I beam I

0.3

I

0,2 *i,*

I *I*

0.1

I *I*

0

-70 ,;-b0 -50 -40 -30 -20 -10 0 10 20 30 *40* *50 6070*

'x' dimension, mm i

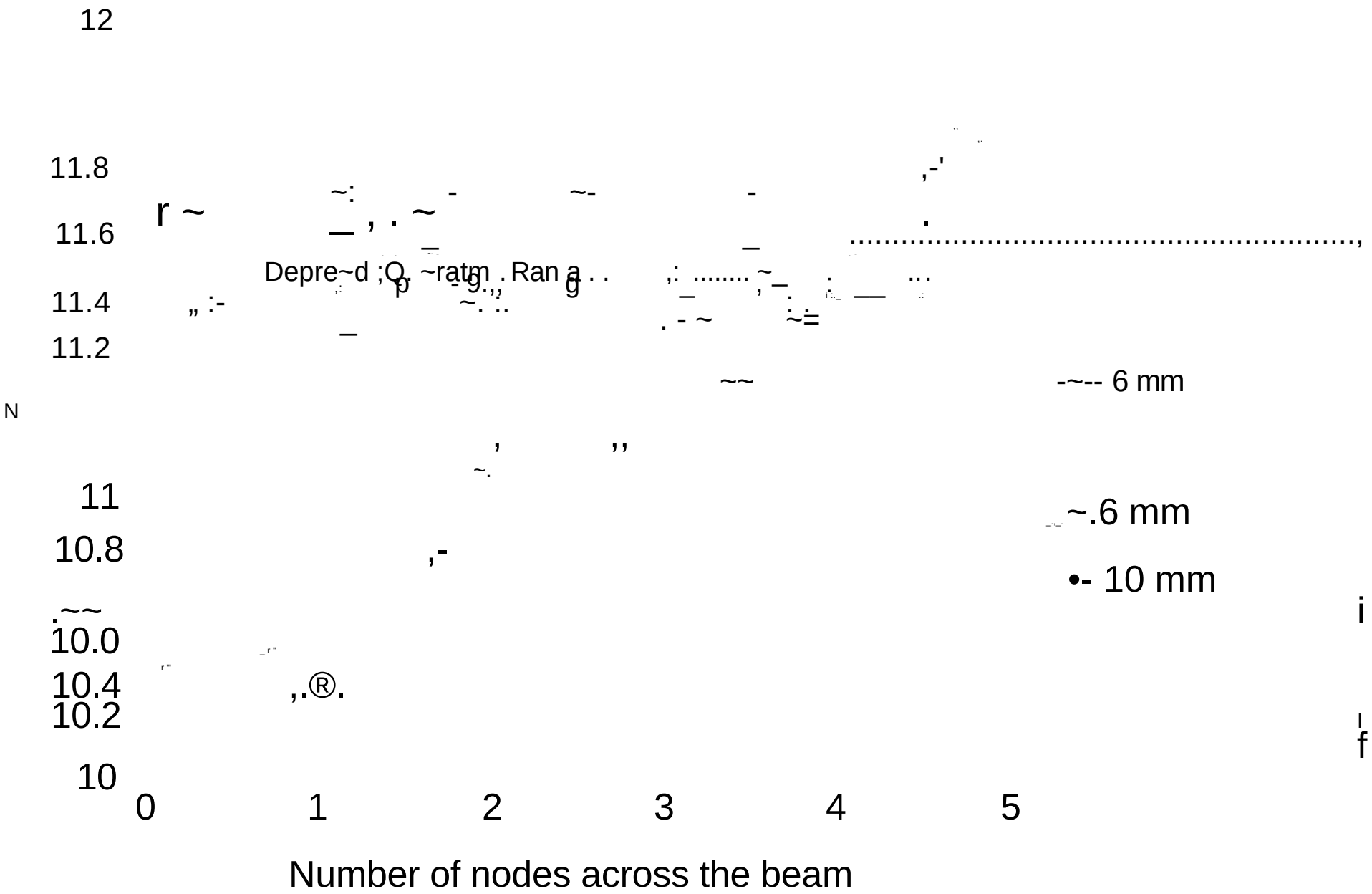
2 CELL DESIGN CONFIGURATION

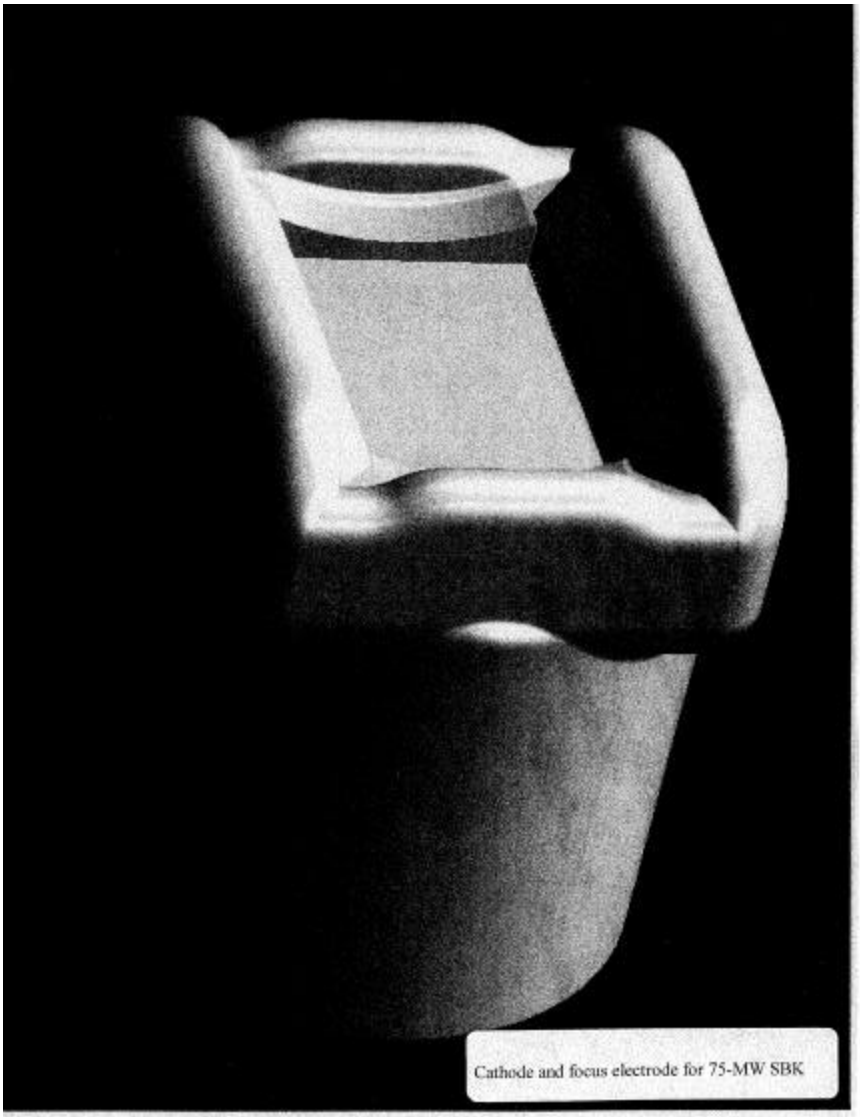
BEAM EDGES

2 CELL GAP SPACING

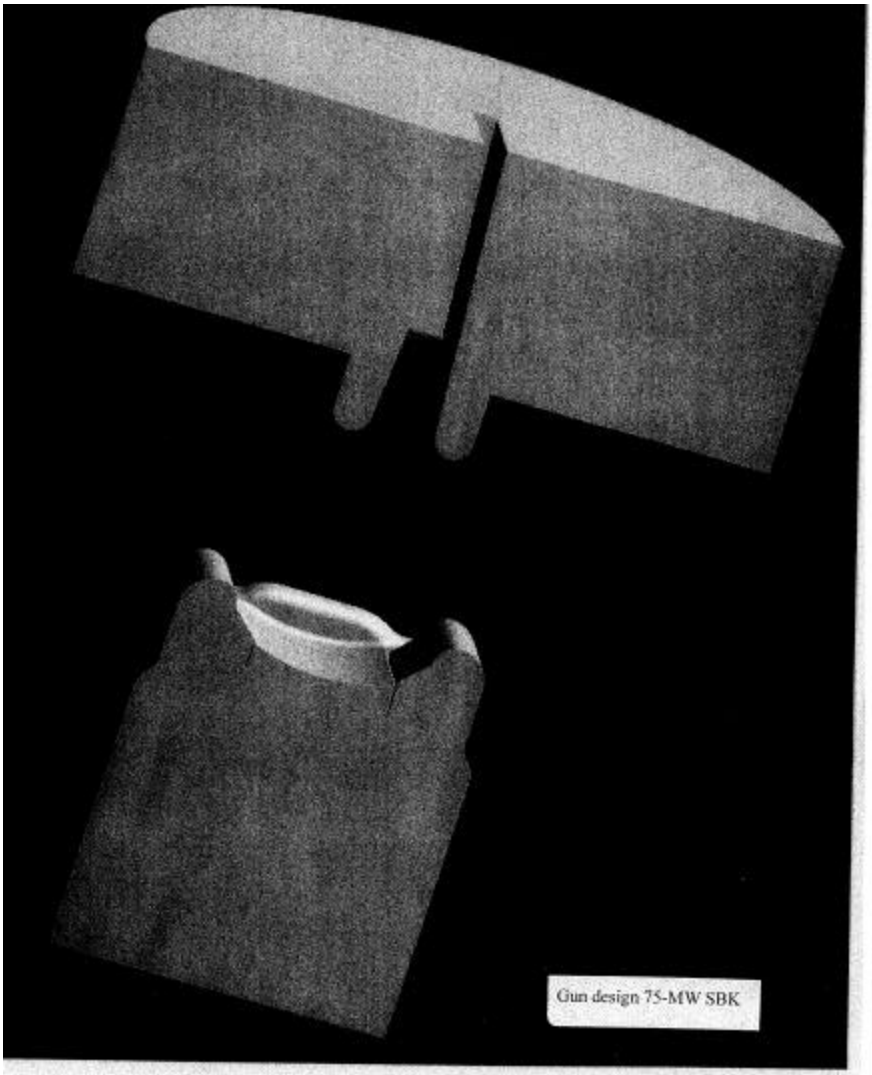
L-F-1

DRIFT TUBE


12
11.8
11.6
11.4
11.2
11
10.8
10.0
10.4
10.2
10
0
1
2
3
4
5
Number of nodes across the beam
-~-- 6 mm
~.6 mm
•- 10 mm



Cathode and focus electrode for 75-MW SBK


Gun design 75-MW SBK